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Examiner D Graybill
To*

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872-9319 AFTER FINAL*

Atty. Dkt. G-81 (CPA of G-31)

PLEASE EXPEDITE IN GAU 2827
AMENDMENT AFTER FINAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Michel LEDUC, Philippe MARTIN, and Richard KALINOWSKI
Serial No.	:	09/101,049
Confirm. No.	:	9220
Filing Date	:	June 26, 1998
GAU	:	2827
Examiner	:	Mr. D. Graybill
For	:	Contactless Electronic Module For A Card Or Label

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AMENDMENT E - AFTER FINAL

This is in response to the April 4, 2002 Office Action
FINAL (Paper No. 19), and follows the Amendment filed in the
Office on July 8, 2002 that was not entered, and is in
response to the Advisory Action of July 24, 2002 (Paper No.
21).

Please amend:

IN THE CLAIMS:

In accordance with Rule 37 C.F.R. §1.121, there is
attached at the foot of this amendment a copy of the amended
claims showing the changes made in those claims from the
ones previously on file

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Claim 27. Cancel

Claim 28 (Twice Amended). An electronic label comprising an electronic module having a substrate (10) with a major plane surface; an antenna (2) mounted on top of said substrate and having a plurality of turns parallel to the substrate major plane surface; an electronic micro circuit (7) insulatively mounted on top of and electrically connected to said antenna; said electrically connected antenna and microcircuit comprising connection terminals (11,12) of the antenna and contact pads (13,14) of the electronic microcircuit (7) connected via leads (15), said label having a height dimension less than 0.76mm, and length and width dimension so that it may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

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Claim 29, cancel

Claim 32. Cancel

Claim 33. (Amended) Electronic label in accordance with claim 28 wherein the antenna (2) has an outer size in the region of 12mm.

Claim 34. Cancel

Claim 35. Cancel

Claim 36. Cancel

Claim 42. Cancel

Claim 43. Cancel

Claim 49. Cancel

Claim 50. (Amended) The label according to claim 28, wherein said substrate comprises an electronic chip card of ISO 7810 mechanical size with a well on one major plane surface thereof, and said antenna and microcircuit being positioned in said well below said major plane surface.

REMARKS

After amendment there is one independent claim, claim 28, with claims 33, 37-40 and 50 dependant on 28.

Claims 27, and 50 have been amended to address the §112 rejection. *and change dependency* There is no new matter in the amended claims.

RP
9-12-02

The amendments to the claims should be entered after FINAL, because they reduce the total number of claims, and the changes are needed to overcome formal (*i.e.*, wording and spelling) §112 rejections.

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Regarding the drawings, Office letter, page 2, ¶¶1-2, this application has 8 sheets of drawings, a copy was submitted to the Office with the July 8, 2002 amendment.

Claim 28 stands rejected on \$102 on Hayashi, JA 71-46922 (old Ref. O) or Matsuzaki 5,604,383 (New Ref. A).

Matsuzaki was cited and applied against claim 28 for the first time in the Office letter FINAL, i.e. it is a new reference cited in the final. The prior amendment (December 21, 2001) before the final did not substantively change claim 28, the amendment thereto were for antecedents.

The rejections are respectfully traversed.

An object and aspect of applicants' invention is a structure that can be efficiently and thriftily (cost effectively) manufactured.

In one embodiment, there is

- the substrate (10),
- on top of one surface of the substrate is the antenna (2),
- on top thereof (i.e., on top the antenna) is the microcircuit (7).

There is an electrical insulation between the antenna and microcircuit, and electrical contact is made between the antenna and microcircuit.

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Note the sequence:-- substrate, antenna on top the substrate, microcircuit on top the antenna.

The rejection is on §102 -- lack of novelty. Hayashi does not have this structure, e.g., Fig. 4A of Hayashi shows the substrate between the antenna and the chip (microcircuit). This is a different structure than claim 28.

Further, Hayashi teaches to make the connections between the antenna and chip by "vias" through the substrate. Vias are not only taught, but seem to be required for Hayashi's structure. Applicant's structure does not require such vias, and shows connections by wire bonding.

Vias are expensive. Hayashi is a relatively costly structure and a more difficult structure to make.

Applicants' structure is different, new over Hayashi, and has the advantages of being simpler, much easier to make and economical to make. Applicants' claim 28 is new §102 over Ref. O and not anticipated by the reference.

Matsuzaki is cited for the first time in the Office letter FINAL. It does not teach and does not suggest an electronic label or transponder (applicants' invention) or a contactless electronic chip card, or card with a transponder (also applicants' invention). The reference's title tells it all -- "... Power Supply Device ..." This

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patent is a power supply -- not a label circuit, and not a contactless electronic chip card.

The reference does have a coil, and does have a chip (micro circuit). It does not have an antenna. The Office letter refers to the patent's element 33. This, 33 is the coil of the magnetic inductive film element:--

. . . A nearly square magnetic inductive film element 30, which has a coil conductor film 33 arranged in a spiral, . . ."

Col. 7, lines 8-10

This is an "induction coil" of a power supply circuit. The power supply ~~ply~~ is small, thus its induction coil 33 is also small. But it is always an induction coil, not an antenna, and not applicants' antenna. Coil 33 does not transmit to, and does not receive signals from, outside the circuit. Its function and operation are different from applicants' antenna and label. pl.

Applicants' device in one application is for use in a standard ISO 7810 size card whose maximum thickness is 0.78 mm. This dimension is critical. Matsuzaki is cited for "a thickness of about 2 mm or less," (col. 10, line 67). This is not a teaching of applicants' critical dimension. Further, Matsuzaki is a "small circuit" without criticality,

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and probably, as taught, cannot be made much thinner than 2.0 mm; and further there is no reason, no criticality, to make it much less than that preferred height.

Claim 28, is new over and not anticipated by either of the two applied references, and withdrawal of the rejection is courteously requested.

Dependent claims 33, 37 and 50 stand rejected on Ref. O and 38-41 on Ref. A. The dimensions and size, are important. There is a long felt need for smaller devices that perform the required duties. In the specification, applicants discuss some prior art that searched for the smallness. Applicants teach in detail how to make the small, novel device of claim 33. The device resulting from that teaching is new. The references do not teach how to get this size. These claims define size, different locations of the parts and in claim 50 (now dependent on claim 28) that the ISO format card's well bottom is the substrate.

This is an amendment after final and the amendment should be entered because (a) the total number of claims is reduced, (b) the amendments are for form (§112) and there is no new matter, and (c) for the reasons given above.

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If the examiner finds any remaining issues, then he is respectfully requested to telephone applicants' attorney for an interview.

Respectfully submitted,

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Certificate under 37 CFR 1.8(a): I hereby certify that this correspondence is being deposited with the United States postal service as first-class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on

Attached are marked claims 28, 33, and 50 showing the changes made in the claims as amended (i.e., Rule 37 C.F.R. §1.121).

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Claim 29 ^{Twice} (Amended). An electronic label [such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions], comprising an electronic module (6) having a substrate (10) with a major plane surface, an antenna (2) and an electronic microcircuit (7), said microcircuit (7) being connected to the antenna (2) to enable contactless operation of the module (6), the whole of the antenna (2) being arranged on the substrate and comprising turns made in the plane of the substrate ⁽¹⁰⁾ ~~(1)~~. said microcircuit antenna connection including said antenna having connection terminals (11,12) being electrically connected to corresponding, respective contact pads (13,14) of the microcircuit, a tuning capacitor (17) being connected in parallel to the terminals (11,12) of the antenna to the contact pads (13,14) of the electronic microcircuit (7), the value of the capacitor (17) being chosen to obtain an operating frequency for module (6) in the range of approximately 1 Mhz to 450 Mhz, said label having a height ^{and length and width dimensions to} dimension less than 0.76mm [whereby said label may] be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

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Claim 33. (Amended) Electronic label in accordance with claim 28 [27] wherein the antenna (2) has an outer size in the region of 12mm.

Claim 50. (Amended) The label according to claim 28 [27], wherein said substrate comprises an electronic chip card of ISO 7810 mechanical size with a well on one major plane [plain] surface thereof, and said antenna and microcircuit being positioned in said well below said major plane surface.